

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Carrier Current Systems, including) (ET Docket No. 03-104)
Broadband over Power Line Systems)
)
Amendment of Part 15 regarding new)
requirements and measurement) ET Docket No. 04-37
guidelines for Access Broadband over)
Power Line Systems)

REPLY COMMENTS ON NOTICE OF PROPOSED RULE MAKING

To The Commission:

If I understand correctly Brian King's comments of 4/26/2004, he's saying that he's a serious internet user, BPL holds great promise as much of the needed infrastructure – – powerlines to wall sockets – – is already in place, we should proceed with it full speed ahead so it can help eliminate the digital divide, and we shouldn't concern ourselves much with radio interference, because the technology will probably improve to overcome it. He borrows the slogan: "universal service for everyone" from the telephone industry, presumably from the Telecommunications Act of 1996. Hmm. Isn't it redundant to say, universal for everyone?

I don't mean to single out this one respondent, I sometimes lament the loss to society of manners as our technology progresses, and if I thought about it, I might find myself guilty of the same. As for telephones being pretty much ubiquitous, at one time not everybody had one. When I grew up in the country, we had a party line rather than pay extra for a private one. My parents instructed my siblings and me on party line courtesy. We weren't to engage in long winded conversations, and we weren't to say anything on the phone we wanted to keep private. If someone broke in with an emergency, we were to relinquish the phone. We saved money on a party line, sure, but we had to use manners, manners that wouldn't have been called for on a private line.

Might this not be the case with BPL? If the cost can be kept down because a portion of the infrastructure is already in place, people in rural America and other places can better afford the internet, but because those powerlines share signals in an rf environment, the users might need to employ manners to make it all work.

Let's look at another emerging technology: the cell phone. People using it in public might be appreciated for using manners that weren't needed in private. There's a blind man I know from riding the bus who gets around pretty well pushing a little cart in front of him. This blind man was telling me one day he was walking along with his cart and a

woman engrossed in a cell phone conversation ran into it. She turned to him and said, "Why don't you watch where you're going?"

This is why I lament loss of manners accompanying an emerging technology. A blind man isn't expected to dodge other pedestrians on the sidewalk. They are supposed to make way for him.

Take the issue of BPL interference to radio receivers. BPL is not to cause harmful interference. Does it make a difference if the radio is in a car? Did it make a difference that the blind man was pushing a cart?

According to PUBLIC LAW 103-408 [Senate Joint Resolution 90]; October 22, 1994, "... be it Resolved by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1 FINDINGS AND DECLARATIONS OF CONGRESS.

"Congress finds and declares that--

- (1) radio amateurs are hereby commended for their contributions to technical progress in electronics, and for their emergency radio communications in times of disaster;
- (2) the Federal Communications Commission is urged to continue and enhance the development of the amateur radio service as a public benefit by adopting rules and regulations which encourage the use of new technologies within the amateur radio service; and
- (3) reasonable accommodation should be made for the effective operation of amateur radio from residences, private vehicles and public areas, and that regulation at all levels of government should facilitate and encourage amateur radio operation as a public benefit.

Approved October 22, 1994." Here we are told "reasonable accommodation should be made for the effective operation of amateur radio from ... private vehicles." And yet I see nothing done in the NPRM to protect a mobile amateur receiver from interference from HF broadband on the power lines along the street he's traveling other than an inadequate Part 15 radiation limit. And I hear that when a mobile ham complains to a BPL provider, their lawyer says it's not harmful radiation because a mile or two down the road he will be past it. What, a mobile ham is to drive out of his way to go around BPL installations, or else speed through them? The blind man weaves and dodges the pedestrians in the sidewalk. Is that manners? I mean, the very least you could do is have them put up little signs on utility poles warning of BPL radiation like they do in some radiation environments for the benefit of pacemaker wearers. Not the least little bit is done to try to be reasonable.

Besides accepting the responsibility for preventing harmful interference, BPL might be *subject* to interference from various rf sources. A cell phone likewise picks up all kinds of background noise which wouldn't be there calling from your home phone. One day I went to use the rest room after coming out of a movie, and a guy down from me made a

call on his cell phone and started leaving a message. People use cell phones everywhere these days. Anyway, after sitting a couple hours in a movie theater, it took me a long time to finish my business, but he was still leaving his message when I was done. I flushed right at the time he was about to leave his call-back number. Boy, did he terminate the connection in a hurry. It was, like, instantaneous. I guess the sound of the toilet flushing just wasn't the impression he wanted to leave at the end of his message.

Similarly, there are some rf signals you really don't want to pick up through your BPL connection. I'm talking about an electromagnetic pulse— —EMP. It's used as a weapon to destroy semiconductor components and is an ultrafast spike producing a voltage greater than the breakdown voltage of the silicon semiconductors in use after it is gathered by a line of wire acting as an antenna. The length of your house wiring acting as that antenna is limited by the distribution transformer which acts as a barrier to rf signals. BPL in bypassing the distribution transformer connects your house wiring at rf to the long power transmission lines greatly increasing the aperture of the antenna your equipment is plugged into and making it more susceptible to EMP. People don't flush next to cell phones very often, but that doesn't mean it can't happen.

This guy was quick in terminating the connection. Some especially military equipment is hardened against EMP with fast acting suppressors. Those little MOV suppressors on your computer are way too slow. You've got BPL, an EMP occurs somewhere, and every semiconductor device connected to the wall socket gets fried. Computer, down the toilet. Transistor radios, likewise. That fancy stereo, and all those microprocessor controlled appliances, gone, gone, gone.

Probably a more common problem would be some nearby radio transmitter interfering with the BPL operation as long as said transmitter is on the air. There is a common problem with background noise on cell phones too. I was sitting on the bus one day when a gal was complaining to her friend on the other side of me that she thinks her man is cheating on her, at the very least he is lying. She sends him out on errands and he is a long time getting back, and the errands don't even get done. She called him on the cell phone and everything seemed to be okay except she could hear women talking in the background. She asked who those women were, and he said it was his mom. She knew for a fact that his mom had an appointment someplace else at the time, so she was planning to have a talk with him.

Cell phones, like BPL, is subject to picking up signals one doesn't want and it might not be compatible with every lifestyle. Telling the hams not to transmit would be like telling your mom you don't want to hear what she has to say; she'll probably say it anyway.

Okay, but since the BPL providers have a lot invested in their service, they will probably make a great deal of effort to remedy these interference problems, especially ones that would disrupt service to their customers. Sure, I believe that's the case. I met this girl one day and we hit it off so I took her someplace for a drink. Then as were enjoying each other's company, by and by, I heard a cell phone ring. She fished it out, but didn't answer it. No, she took off for the back of the bar, down the hallway to where it was quiet, over near the rest rooms. And she was gone for quite a while too. When she came back she explained to me that she'd made arrangements to cook dinner for her fiancé and friends, and she was late, and they were all there waiting for her wondering where she was. That

explained it.

So we ordered some more drinks and got back to our conversation, and things were going really well, when, by and by, wouldn't you know it, that phone rang again. So it was off to the back for her for a while.

I think that the BPL companies have a process where they can come out and notch problem frequencies that interfere with operation, but it's a laborious process, like that girl making her way down and to the back of the bar. But if they have to do it once, they may have to do it again when another transmitter opens up on another frequency.

Anyway, I sort of lost track of the number of times that phone rang over the course of the evening, but eventually it was very late, so she gave me her number and we both left. I didn't realize people ate dinner that late, and I also never realized serious internet users were that patient. But, learn something new every day.

That girl sort of reminds me of the powerlines BPL wants to use, they'll pick up any signal that comes along. For somebody who is serious about the internet to use such an open system, I really couldn't understand it until I read the comment saying the technology may improve to eliminate the interference problem. That explains it. You make a serious commitment to someone figuring that person will change. Happens every day. But some people prefer a dedicated line.

Here's another cell phone story you may be able to relate to. I got on the bus one day for a quiet ride, but the fellow in the seat ahead of me called his girlfriend at work talking in a conversational tone that filled the whole bus. He explained the reason for his call. He realized he still had some minutes left on his plan and he wanted to hear her voice. Yes, and we all got to hear it too for the duration of the call. Is it good manners to do a thing just because you're able to do it if it's going to bother a lot of people?

I read in the NPRM, "Access BPL is being developed worldwide, and encouraging the deployment of the technology in the U.S. will ... promote continued leadership in broadband technology ..." (FCC 04-29, ¶ 30). It sounds like it is being done just because we're able to, especially since this statement ignores the fact that countries who have tried it have banned it. Maybe we can, but it will bother a lot of people.

Respectfully Submitted,
Earl S. Gosnell III